

REMARKS

Claims 1-25 and 27-30 are pending in the application.

Claims 1-25 and 27-30 have been rejected.

Claims 21-25 have been amended.

Specification

The specification is objected to as purportedly failing to provide proper antecedent basis for the claimed subject matter. Specifically, pages 2-3 of the present Office Action allege that a “computer-readable medium” is not disclosed in the Specification to support the claimed limitation of Claim 21. Applicants have amended paragraph [0089] of the present Specification to recite a “computer-readable storage medium” to support the amendments to Claims 21-25 proposed by page 2 of the Office Action. Applicants assert that the amendments to the Specification do not introduce any new matter. Thus, in light of the amendments to the present Specification, Applicants respectfully request that the objection be withdrawn.

Rejection of Claims under 35 U.S.C. § 101

Claims 21-25 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants have amended Claims 21-25 as suggested by page 2 of the Office Action. Thus, Applicants respectfully assert that independent Claim 21 and dependent Claims 22-25 recite statutory subject matter within the meaning of 35 U.S.C. § 101 and respectfully request that the rejection be withdrawn.

Rejection of Claims under 35 U.S.C. § 103(a)

Claims 1, 2, 5-8, 11-12, 15-17, 20-22 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Short et al. (USPN 6,178,529) (“Short”), in view of Chao et al. (USPN 6,393,485) (“Chao”). While not conceding that the cited references qualify as prior art, but instead to expedite prosecution, Applicants have chosen to respectfully disagree and traverse the rejection as follows. Applicants reserve the right, for example, in a continuing application, to establish that the cited references, or other references cited now or hereafter, do not qualify as prior art as to an invention embodiment previously, currently, or subsequently claimed.

Applicants respectfully submit that Claims 1, 2, 5-8, 11-12, 15-17, 20-22, and 25 are patentable over Short and Chao, taken alone or in any permissible combination, because Short and Chao, taken alone or in any permissible combination, do not disclose (or render obvious) the limitations of independent Claims 1, and similarly, independent Claims 11, 16, and 21. For example, nothing in Short and Chao, taken alone or in any permissible combination, discloses (or renders obvious) “determining whether a resource in a first cluster can be allocated to provide a quantity of the resource to an application,” as recited in the independent claims.

In support of the rejection, the present Office Action cites col. 10, line 62-col. 11, line 4 of Short as allegedly disclosing the recited limitation. Col. 10, line 62-col. 11, line 4 of Short states:

The monitoring methods include LooksAlive and IsAlive failure detection methods, which allow the cluster software to monitor the health of a specific instance of a resource. These methods are called from a timer mechanism within the cluster software, and are thus a synchronous polling operation.

The LooksAlive method is preferably a cursory failure detection method called to perform a quick check that determines if a specified resource object 63 appears to be online (available for use).

By citing this passage as allegedly disclosing the recited element of the independent claims, the present Office Action appears to be analogizing the detection methods (LooksAlive and IsAlive) and monitoring the health of a specific instance of a resource with “determining whether a resource in a first cluster can be allocated to provide a quantity of the resource to an application,” as recited in the independent claims. However, even if the analogy were correct (a point which Applicants do not concede), the cited passage of Short merely discusses health monitoring of a resource. Nothing in the recited passage of Short discloses (or renders obvious) the provision of a quantity of a resource to an application,” as recited in the independent claims. Thus, Short’s health monitoring does not provide anything except a status of the resource, much less determine whether a quantity of a resource can be provided to an application, as claimed.

Also, nothing in Short and Chao, taken alone or in any permissible combination, discloses (or renders obvious) “if the resource in the first cluster cannot be allocated to provide the quantity of the resource to the application, determining whether the first cluster can be reconfigured to provide the quantity of the resource to the application,” as

recited in the independent claims. As allegedly disclosing this recited limitation, the present Office Action cites col. 8, lines 27-36 of Short, which states:

For example, if a resource 61₁₁ fails, the resource manager 86 may choose to restart the resource 61₁₁ locally (e.g., up to some predetermined number of times), or to take the resource 61₁₁ offline alone with any resources dependent thereon. If the resource manager 86 takes the resource 61₁₁ offline (such as if local restart attempts fail too many time (*sic*) consecutively), the resource manager 86 indicates to the failover manager 88 that the group including the resource 61₁₁ should be restarted on another system (e.g., 60₂) in the cluster, known as pushing the group to another system.

In other words, it appears that, by citing the aforementioned passage in Short, the present Office Action is analogizing the local restart attempts of the resource to the claimed act of “determining whether the first cluster can be reconfigured to provide the quantity of the resource to the application.” Even if the recited passages of Short could be properly analogized to the claimed limitation (a point which Applicants do not concede), the mere restart of a resource on a system does not constitute the claimed reconfiguration since the configuration of Short’s system is not altered no matter how many times the resource is restarted on Short’s system.

Further, nothing in Short and Chao, taken alone or in any permissible combination, discloses (or renders obvious) “if the first cluster cannot be reconfigured, restarting the application in a second cluster having a sufficient amount of the resource to provide the quantity of the resource to the application,” as recited in the independent claims. The present Office Action correctly asserts that Short fails to specifically disclose the recited restarting limitation. Thus, the present Office Action cites col. 3, lines 23-27; col. 5, lines 40-45; and col. 7, lines 34-43, all of Chao, as allegedly disclosing the recited restarting limitation. Col. 3, lines 23-27 of Chao states “When a resource fails, ClusterServer will either restart it on the local node or move the resource group to the other node, depending on the resource restart policy and the resource group failover policy and cluster status.” In other words, col. 3, lines 23-27 of Chao merely discloses the failover of a resource between nodes of a two-node Microsoft Cluster Server (MSCS) cluster. Nothing in col. 3, lines 23-27 of Chao discloses (or renders obvious) the restart of a resource from a first cluster in a second cluster, as claimed in the independent claims.

Col. 5, lines 40-45 of Chao states: “Applications, whether they are enhanced for an individual cluster or not, can readily take advantage of multi-cluster system cluster features. Instead of mutual failover between one pair of nodes, the multi-cluster allows an application failover between any two nodes in a large cluster.” However, col. 5, lines 40-45 of Chao still do not disclose (or render obvious) the restart of a resource from a first cluster in a second cluster, as claimed in the independent claims, since col. 5, lines 40-45 merely discusses the extension of the clustering features of the MSCS to more than two nodes or “failover between any two nodes in a large cluster.” In other words, Chao’s failover is between nodes that have been aggregated into a single cluster, not between two difference clusters.

Finally, col. 7, lines 34-43 of Chao states:

The decisions of bringing resources and resource groups to their on-line and off-line state is made by the multi-cluster server. If the sub cluster (or the node that runs that sub cluster) fails, multi-cluster servers will restart those resources on resource groups that were running on that node on some other sub clusters. When the failed node and the corresponding MSCS sub cluster is restarted and re-joins the multi-cluster, there will be resources conflicts if the new node and new sub cluster try to bring those resources to on-line state.

However, col. 7, lines 34-43 of Chao merely states that resources are failed over to nodes on “some other sub clusters” when a MSCS sub cluster (which includes two nodes, as previously discussed) or a node within a MSCS sub cluster fails. Col. 7, lines 34-43 of Chao do not disclose (or render obvious) “if a first cluster cannot be reconfigured, restarting the application in a second cluster” since mere failure of a node or sub cluster does not constitute an inability to “reconfigure” a cluster, as recited in the independent claims, since no reconfiguration of the failed node or sub cluster is even attempted in Chao. When a node or sub cluster fails, the resource is automatically restarted in a second node without any attempt to revive the node or sub cluster.

Because of at least the foregoing reasons, Short and Chao, taken alone or in any permissible combination, fail to disclose (or render obvious) the limitations of the independent claims. Hence, independent Claims 1, 11,16, and 21, and all claims dependent therefrom, are patentable over Short and Chao, taken alone or in any permissible combination. Thus, Applicants respectfully request that the rejection be withdrawn.

Claims 3, 9, 10, 13, 18 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Short in view of Chao, as applied to claims 1, 11, 16 and 21 above, and further in view of Trossman et al. (USPN 7,308,687) (“Trossman”). While not conceding that the cited references qualify as prior art, but instead to expedite prosecution, Applicants have chosen to respectfully disagree and traverse the rejection as follows. Applicants reserve the right, for example, in a continuing application, to establish that the cited references, or other references cited now or hereafter, do not qualify as prior art as to an invention embodiment previously, currently, or subsequently claimed. Trossman is not cited as disclosing (or rendering obvious) any of the limitations of independent Claims 1, 11, 16, and 21. Thus, Claims 3, 9, 10, 13, 18, and 23 are patentable over Short, Chao, and Trossman, taken alone or in any permissible combination, by virtue of their dependency on the allowable independent claims. Thus, Applicants respectfully request that the rejection be withdrawn.

Claims 4, 14, 19, 24 and 27-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Short in view of Chao, as applied to claims 1, 11, 16 and 21 above, and further in view of Fong et al. (USPN 6,366,945) (“Fong”). While not conceding that the cited references qualify as prior art, but instead to expedite prosecution, Applicants have chosen to respectfully disagree and traverse the rejection as follows. Applicants reserve the right, for example, in a continuing application, to establish that the cited references, or other references cited now or hereafter, do not qualify as prior art as to an invention embodiment previously, currently, or subsequently claimed. Fong is not cited as disclosing (or rendering obvious) any of the limitations of independent Claims 1, 11, 16, and 21. Thus, Claims 4, 14, 19, 24, and 27-30 are patentable over Short, Chao, and Fong, taken alone or in any permissible combination, by virtue of their dependency on allowable independent Claims 1, 11, 16, and 21. Applicants respectfully request that the rejection be withdrawn.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, the Examiner is invited to telephone the undersigned at 512-439-5087.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicants hereby petition for such extensions. Applicants also hereby authorize that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to Deposit Account 502306.

Respectfully submitted,

/Brenna A. Brock/

Brenna A. Brock
Attorney for Applicants
Reg. No. 48,509
Telephone: (512) 439-5087
Facsimile: (512) 439-5099